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ABSTRACT

This survey, undertaken at the request of the National Science Foundation, was conducted in an attempt to obtain current data on compensation practices for graduate research assistants, and to determine variations among departments and types of institutions. Questions were directed toward policies governing compensation rates and ranges of compensation amounts currently available to graduate assistants in a number of fields of study. Institutions were asked whether specific compensation policies existed, whether they had been established by the institution or by individual departments, and about factors influencing variations in compensation amounts. Information about maximum and minimum amounts that could be paid under existing policy were requested, as well as the highest, lowest, and average amounts actually paid in individual departments during the 1973-74 academic year. Data on tuition charges and tuition waiver amounts were also solicited. The questionnaire for this survey is included in the appendix, along with a list of participating institutions. (Author/PG)

ED 096923

Compensation Practices for Graduate Research Assistants:

A Survey of Selected Doctoral Institutions

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Joan L. Kinzer and Elaine H. El-Khawas

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Compensation Practices for Graduate Research Assistants: A Survey of Selected Doctoral Institutions

Joan L. Kinzer and Elaine H. El-Khawas

Many colleges and universities have long-established traditions of appointing graduate students as assistants on research projects conducted by faculty members. The terms of such appointments have varied substantially, however, particularly in the nature and extent of a student's responsibilities and in the manner and terms of compensation extended to the graduate assistant.

This survey, undertaken at the request of the National Science Foundation, was conducted in an attempt to obtain current data on compensation practices for graduate research assistants, and to determine variations among departments and types of institutions. Questions were directed toward policies governing compensation rates and ranges of compensation amounts currently available to graduate assistants in a number of fields of study. Institutions were asked whether specific compensation policies existed, whether they had been established by the institution or by individual departments, and about factors influencing variations in compensation amounts. Information about maximum and minimum amounts that could be paid under existing policy were requested, as well as the highest, lowest, and average amounts actually paid in individual departments during the 1973-74 academic year. Data on tuition charges and tuition waiver amounts were also solicited. (The questionnaire for this survey is presented in Appendix A.)

Relatively few studies have been conducted on this topic, undoubtedly due in part to the difficulties posed by the substantial diversity in compensation practices. Nevertheless, the available studies provide good perspective on certain problems and trends with regard to assistantship compensation and policies. One particularly helpful study, conducted by Peggy Heim and Becky Bogard under the auspices of the American Association of University Professors,[1] focused on the workload and remuneration of both teaching and research assistants at 112 public and private doctorate-granting institutions during 1968-69. Of interest to the present survey were their findings that (1) the usual length of workweek varied between 12 and 20 hours, (2) state universities subsidized out-of-state students to a greater extent than in-state students (presumably in the form of tuition waivers or remission), and (3) the average net cash salaries (mean salary minus mean tuition payments) were higher at public institutions ($2,530 for residents, $2,444 for nonresidents) than at private colleges and universities ($2,343).

Another survey was conducted in 1972 by Robert B. Hallock.[2] He surveyed 162 Ph.D.-granting Physics departments throughout the United States in order to determine the availability of fellowships, teaching assistantships, and research assistantships for graduate students. As one of his findings, he reported that the average salary for third-year (unmarried) graduate research assistants during the 1972-73 academic year was $2,675 (that is, after tuition was paid).

A task force of the National Association of College and University Business Officers has been conducting a study of the varying methods by which institutions charge the cost of graduate research assistants to externally-sponsored research grants and contracts.[3] The first phase of the

study consisted of an informal telephone survey of ten institutions: later, questionnaires were sent out to a larger group. Based on the telephone survey, the task force has documented substantial variation in how tuition and fees are charged to sponsored research projects.

These studies illustrate the diversity of institutional practices in methods of compensating graduate research assistants and of reporting data. Practices vary not only among institutions, but also in the terms of appointment accorded to individual students within institutions or departments. The cash value of a tuition waiver, for instance, often depends on the number of credit hours an assistant actually carries during any given quarter or semester. As noted by Heim and Bogard, these types of diversity impose major limitations on the comparability of response across institutions. Although the present study is also affected by such limitations, it has benefited from the perspective and data contributed by these earlier studies.

Procedures

The data for this report were collected as part of the continuing program of the Higher Education Panel, which was established at the American Council on Education in 1971 in order to conduct small-scale surveys on topics of general policy interest to the higher education community. The Panel is based on a network of campus representatives at 644 institutions broadly representative of all colleges and universities in the United States. For any given survey, the entire Panel or a subsample may be utilized.

This survey was based on a subset of 110 Panel institutions that granted science and engineering doctorates during 1970-71. Institutions were selected from a listing of Panel member institutions ranked according

to the number of science and engineering doctorates awarded in 1970-71. Institutions that produced large numbers of science and engineering doctorates were selected because they were believed to also be the institutions with the largest number of graduate research assistants.

Selection followed a two-step procedure developed by personnel of the National Science Foundation. First, within each of the fifty states and the District of Columbia, the public and private institutions that granted the highest number of science and engineering doctorates were chosen, a procedure that yielded 75 institutions. (Not all states have both a public and private institution granting science and engineering doctorate degrees.) An additional 35 Panel institutions were then chosen in descending order of the number of science and engineering doctorates granted in 1970-71. By these procedures, 68 public institutions and 42 private institutions were selected (see Appendix B for a complete listing). Together, the selected institutions represented every state and accounted for 80 percent of all science and engineering doctorates awarded during 1970-71.

Questionnaires for the survey were mailed in April 1974. Institutions were requested to complete questionnaires for each of ten specified departments[4] if these departments granted doctorate degrees and had graduate research assistants funded from research projects during 1973-74.

Responses were received from 97 institutions (88 percent). Usable data were provided by a total of 640 departments, or approximately seven departments per institution. As shown in Table 1, comparatively low numbers of responses were received from departments of mathematics, economics, and sociology. Many of these departments reported that they had no research assistants.

A number of interpretive difficulties became apparent when returned questionnaires were reviewed. Compensation amounts had been reported on the basis of differing time standards, varying from ten-hour to forty-hour per week assistantship appointments. Similarly, tuition and waiver reports were troublesome, largely because departments varied in whether they reported resident or nonresident tuition amounts.

Much editing of questionnaires was therefore necessary in order to obtain usable data. Where possible, clarification of intended response was achieved through information gained from telephone calls, letters, comparisons with other departments within an institution or, as was the case with tuition amounts, use of catalogs and published data.[5] Institutions provided a great deal of assistance, not only by helpful responses to telephone inquiries but also through cover letters explaining certain discrepancies, inclusion of institutional materials describing compensation procedures in full, or provision of additional information on the questionnaires themselves.

As a result of this editing process, much of the initial confusion and lack of comparability among responses was resolved. To the extent possible, the data reported here on compensation amounts were adjusted to reflect the amounts available for fifteen- or twenty-hour-per-week research assistantships. During the editing, tuition and waiver amounts were obtained separately for resident and nonresident students. Because of much nonresponse and wide variation in amounts provided, the items on summer compensation were not used. The data on fringe benefits have also been ommitted; most institutions either reported that no such benefits were provided or were not able to estimate the amount.

The accompanying tables summarize the survey responses separately for public and private institutions. Data are presented for individual types

of departments and for all departments combined. Table 1 shows the number of respondents by department and institutional control. Somewhat low numbers of respondents for certain departments or topics suggest the need for caution in interpreting institutional data.

Discussion

This report provides descriptive information on several sources of variability in compensation amounts and presents average amounts for a number of categories of compensation within types of institutions and departments. These categories of compensation include maximum and minimum amounts established by policy, amounts currently being awarded, and "total" compensation -- a figure combining the average amount of tuition waiver and the average amount of compensation (or stipend) available to third-year graduate research assistants.[6] All amounts refer to academic year 1973-74 compensation.

Certain general trends and uniformities in the survey findings are highlighted in this section. The detailed data presented in the tables are amenable to much further analysis but the reader is reminded that, because of the small Ns in many categories, reported differences between departments may not be reliable. The results nevertheless provide an overview of current institutional practices of compensation for graduate research assistants.

Availability of Tuition Waiver

An important basis on which institutions and departments varied in their compensation practices was whether or not they extended tuition waivers to graduate research assistants. Such a waiver represented financial benefit

to the student in addition to the basic assistantship compensation received. As can be seen (Table 2), the majority of institutions (69 percent of public institutions and 71 percent of private institutions) provided their research assistants with some amount of tuition waiver. It can be noted that public institutions had two distinctive types of waiver: (1) a complete or partial waiver extended to all graduate research assistants, regardless of their state residence, and (2) a waiver of the difference between resident and nonresident tuition rates for out-of-state research assistants, with all research assistants paying resident rates. This nonresident differential waiver, which would only benefit out-of-state assistants, was reported by 27 percent of public institutions.

For those departments granting tuition waivers, Table 3 shows the average amount of waiver given during academic year 1973-74. These averages are based on both complete and partial tuition waivers, including waivers of the out-of-state differential. Averages varied relatively little by department; most closely approximated the overall averages of $564 and $1,149 (for resident and nonresident waiver, respectively) at public institutions and the average of $2,434 at private institutions. Indicative of the general role of partial waivers, perhaps, is the comparison of these waiver amounts with the average tuition amounts calculated for these institutions (Table 4): resident and nonresident tuition at public institutions averaged $620 and $1,556 respectively; tuition at private institutions averaged $2,636 during 1973-74.

Sources of Variation in Compensation

Approximately half of all departments responding were guided by institutional policies on maximum and/or minimum amounts of compensation they may extend to graduate research assistants (Table 5). In addition, 33

percent of public institutions and 36 percent of private institutions reported they had departmental policies. Between four and 30 percent of respondents, varying by departmental categories, said that no specific policies exist with regard to maximum and/or minimum amounts.[7]

Table 6 illustrates that the years of prior research experience and the amount of graduate study completed were the factors most often used in determining variations in compensation. Relatively small numbers of both public and private institutions allowed added compensation for dependents. About 16 percent of departments in public institutions and 14 percent of departments in private institutions indicated that there was no variation in the amount of compensation granted to their research assistants.

Amounts of Compensation

Tables 7 through 12 present average (mean) compensation amounts accorded to graduate research assistants.[8] Tables 7 and 8 indicate the average maximum and minimum amounts of compensation established by institutional or departmental policy; Tables 9, 10, and 11 illustrate the average, highest and lowest amounts extended to research assistants; and Table 12 presents mean amounts accorded to third-year graduate research assistants. This latter category, based on a specified level of study, was believed to provide a better comparison across institutions than average amounts reflecting various student levels.

For all of these tables, average (mean) amounts are presented separately for departments which do and do not provide a waiver of tuition in addition to basic compensation. Because very few responding departments at private institutions did not provide a tuition waiver, compensation amounts for this category are not presented separately by departments.

Some general trends can be noted from these tables. First, departments offering a waiver of tuition typically extended lower rates of basic compensation than departments with no waiver. This was true for both public and private institutions. Second, when comparing departments by public or private control of the institution, private institutions generally reported lower amounts of compensation. This pattern, however, reversed itself for the few departments at private institutions which offered no tuition waiver. Third, as could be expected, average compensation amounts for third-year graduate research assistants were somewhat higher than the averages reported for assistants in general.

Total Compensation Amounts

Tables 13, 14, and 15 present total compensation amounts for third-year graduate research assistants. This includes a combination, for each department responding, of the amount of compensation plus any tuition waiver that was granted. The lower amounts extended to resident students at public universities (as compared to nonresident students) reflect the lower amounts of tuition waiver they receive.

Table 13 illustrates average total compensation amounts for all institutions that provided information for third-year research assistants. Table 14 presents these amounts for the 20 public and 20 private institutions that currently charge the highest tuition rates among responding institutions (for public institutions, the highest nonresident tuition rates). As can be seen, the mean total amounts reported by this small number of institutions are slightly higher than for institutions in general (Table 13). Of the 20 highest ranking public institutions, for example, a mean of $3,513 total compensation was reported for resident students by the 13 biochemistry departments that reported data on this item. The comparable figure for institutions in general was $3,354.

Table 15 presents average total compensation amounts for the 20 public and 20 private institutions responding that granted the highest numbers of science and engineering doctorates in 1970-71.[9] Except for a few fields of study, amounts for these institutions were slightly higher than amounts for institutions in general (Table 13).

Summary

This survey of departments within selected Ph.D.-granting institutions provides needed information about institutional policies with regard to establishing compensation rates, sources of variation in the amounts extended to graduate research assistants, and actual differences in current practice. It has been shown, for instance, that most institutions currently have guidelines on compensation and that the majority provide tuition waivers of some kind. At public institutions, nonresident research assistants received greater average compensation than did resident students. This is basically a reflection of the waiver of higher tuition rates that apply to nonresident students. Private institutions generally tended to provide lower basic compensation amounts than public institutions; however, private institutions provided greater total compensation (when the amount of tuition waiver is included).

FOOTNOTES

[1]Peggy Heim and Becky Bogard, "Compensation of Graduate Assistants, 1968-69: A Preliminary Survey," AAUP Bulletin (Winter, 1969), pp. 483-488.

[2]Robert B. Hallock, "National Ph.D. Student Support in Physics 1972-73," (multilithed), University of Massachusetts, 1974.

[3]Task Force on Graduate Student Support, George H. Dummer, (Massachusetts Institute of Technology), chairman. National Association of College and University Business Officers, Washington, D.C. (Reports of survey findings are as yet unpublished.)

[4]These included biochemistry, biology, chemical engineering, chemistry, economics, electrical engineering, mathematics, physics, psychology, and sociology.

[5]"Graduate Student Tuition and Fees, 1973-74," (xeroxed) National Association of State Universities and Land-Grant Colleges, Washington, D.C.; Graduate Programs and Admissions Manual, 1973-74. The Graduate Record Examinations Board and the Council of Graduate Schools in the United States, Washington, D.C.

[6]Excluding fringe benefits.

[7]These mutually exclusive categories (institutional, departmental, none) are somewhat illusory. Many departments indicated that both institutional and departmental policies were involved. Whenever departmental policy functioned within limits established by the institution, these cases were coded as institutional policy.

[8]Averages are presented in the tables only when based on data provided by ten or more departments. The number of departments responding is indicated for each average that is presented.

[9]According to a list maintained by the National Science Foundation.

TABLES

Table I

Survey Response
by Department and Institutional Control

Departments	Number of Departments Responding		
	All Institutions	Public Institutions	Private Institutions
Biochemistry	56	39	17
Biology	66	42	24
Chemical Engineering	68	43	25
Chemistry	85	54	31
Economics	53	38	15
Electrical Engineering	73	46	27
Mathematics	34	22	12
Physics	83	52	31
Psychology	71	48	23
Sociology	51	35	16
Total Number of Departments Providing Data	640	419	221
Total Number of Institutions Responding	(97)	(62)	(35)

Table 2

Availability of Tuition Waiver, 1973-74
by Department and Institutional Control

Departments	No. of Depts.	Percent of Departments With: No Waiver	Waiver For All Students	Waiver For Nonresidents[a]	Total Percent
		Public Institutions			
Biochemistry	39	33%	49%	18%	100%
Biology	42	31%	43%	26%	100%
Chemical Engineering	43	30%	44%	26%	100%
Chemistry	53	41%	40%	19%	100%
Economics	38	21%	37%	42%	100%
Electrical Engineering	46	31%	39%	30%	100%
Mathematics	22	32%	36%	32%	100%
Physics	52	33%	40%	27%	100%
Psychology	48	27%	48%	25%	100%
Sociology	35	20%	46%	34%	100%
All Departments	418	31%	42%	27%	100%
		Private Institutions			
Biochemistry	17	29%	71%	-	100%
Biology	24	25%	75%	-	100%
Chemical Engineering	25	28%	72%	-	100%
Chemistry	31	29%	71%	-	100%
Economics	15	20%	80%	-	100%
Electrical Engineering	27	33%	67%	-	100%
Mathematics	12	17%	83%	-	100%
Physics	31	32%	68%	-	100%
Psychology	23	39%	61%	-	100%
Sociology	16	25%	75%	-	100%
All Departments	221	29%	71%	-	100%

[a]Refers to the waiver of out-of-state differential only, whereby nonresident students pay the same amount of tuition as students who are residents of the state.

Table 3

Average Amount of Tuition Waiver, 1973-74
(Mean Amounts by Department and Institutional Control)

Departments	Public Institutions		Private Institutions
	Resident Students	Nonresident Students	
Biochemistry	$587	$1,287	$2,197
Number of Depts.	(19)	(25)	(12)
Biology	611	1,174	2,435
Number of Depts.	(16)	(27)	(18)
Chemical Engineering	515	1,086	2,468
Number of Depts.	(18)	(29)	(18)
Chemistry	562	1,146	2,454
Number of Depts.	(20)	(30)	(22)
Economics	546	1,06[illegible]	2,494
Number of Depts.	(14)	(3[illegible])	(11)
Electrical Engineering	488	1,03[illegible]	2,428
Number of Depts.	(16)	(30)	(18)
Mathematics	-[a]	1,217	2,791
Number of Depts.		(15)	(10)
Physics	524	1,130	2,444
Number of Depts.	(19)	(33)	(21)
Psychology	579	1,212	2,249
Number of Depts.	(22)	(33)	(14)
Sociology	669	1,189	2,440
Number of Depts.	(15)	(27)	(12)
All Departments	564	1,149	2,434
Number of Depts.	(167)	(279)	(156)

[a]Less than 10 departments provided data.

Table 4

Average Amount of Tuition and Fees, 1973-74
(Mean Amounts by Department and Institutional Control)

Departments	Public Institutions		Private Institutions
	Resident Students	Nonresident Students	
Biochemistry	$620	$1,595	$2,621
Number of Depts.	(39)	(39)	(17)
Biology	623	1,536	2,640
Number of Depts.	(42)	(42)	(24)
Chemical Engineering	596	1,468	2,630
Number of Depts.	(43)	(43)	(25)
Chemistry	614	1,541	2,587
Number of Depts.	(54)	(54)	(31)
Economics	628	1,547	2,782
Number of Depts.	(38)	(38)	(15)
Electrical Engineering	600	1,512	2,530
Number of Depts.	(46)	(46)	(27)
Mathematics	658	1,679	2,816
Number of Depts.	(22)	(22)	(12)
Physics	597	1,539	2,670
Number of Depts.	(52)	(52)	(31)
Psychology	643	1,629	2,590
Number of Depts.	(48)	(48)	(23)
Sociology	656	1,584	2,653
Number of Depts.	(35)	(35)	(16)
All Departments	620	1,556	2,636
Number of Depts.	(419)	(419)	(221)

Table 5

Basis for Compensation Rates, 1973-74
by Department and Institutional Control
(In Percentages)

Department	No. of Depts.	Minimum and/or Maximum Amounts of Compensation are: Established By Institutional Policy	Established By Departmental Policy	Not Governed By Specific Policy	Total Percent
			Public Institutions		
Biochemistry	39	49%	43%	8%	100%
Biology	42	60%	19%	21%	100%
Chemical Engineering	43	61%	30%	9%	100%
Chemistry	54	50%	41%	9%	100%
Economics	38	63%	29%	8%	100%
Electrical Engineering	46	63%	33%	4%	100%
Mathematics	22	59%	27%	14%	100%
Physics	51	47%	35%	18%	100%
Psychology	48	54%	38%	8%	100%
Sociology	35	66%	34%	-	100%
All Departments	418	57%	33%	10%	100%
			Private Institutions		
Biochemistry	17	12%	65%	23%	100%
Biology	24	50%	42%	8%	100%
Chemical Engineering	25	72%	20%	8%	100%
Chemistry	30	40%	37%	23%	100%
Economics	15	40%	33%	27%	100%
Electrical Engineering	27	52%	22%	26%	100%
Mathematics	12	75%	17%	8%	100%
Physics	30	37%	50%	13%	100%
Psychology	23	35%	35%	30%	100%
Sociology	16	44%	31%	25%	100%
All Departments	219	45%	36%	19%	100%

Table 6

Sources of Variation in Compensation Amounts
Paid to Graduate Research Assistants, 1973-74
(Number of Departments Reporting Each Type of Variation)[a]
(In Percentages)

Departments	No. of Depts.	Amount Does Not Vary	Amount Varies By:			
			Research Experience	Amount of Study Completed	Dependents	Other
Public Institutions						
Biochemistry	39	21%	31%	59%	15%	21%
Biology	42	12%	40%	43%	7%	33%
Chemical Engineering	43	9%	42%	72%	14%	42%
Chemistry	54	11%	41%	57%	2%	50%
Economics	38	24%	39%	66%	0%	26%
Electrical Engineering	46	9%	57%	80%	4%	26%
Mathematics	22	18%	23%	73%	0%	27%
Physics	52	17%	44%	65%	6%	17%
Psychology	48	19%	35%	65%	4%	19%
Sociology	35	26%	29%	63%	3%	23%
All Departments	419	16%	39%	64%	6%	29%
Private Institutions						
Biochemistry	17	18%	24%	65%	47%	41%
Biology	24	13%	21%	63%	17%	29%
Chemical Engineering	25	16%	20%	56%	12%	12%
Chemistry	31	26%	29%	52%	16%	29%
Economics	15	7%	4%	53%	7%	27%
Electrical Engineering	27	0%	48%	81%	15%	19%
Mathematics	12	8%	25%	75%	17%	25%
Physics	31	26%	19%	55%	23%	19%
Psychology	23	9%	48%	70%	13%	26%
Sociology	16	6%	44%	69%	19%	19%
All Departments	221	14%	31%	63%	18%	24%

[a]Respondents were asked to indicate all that applied; therefore percentages do not total to 100%.

Table 7

Compensation Ranges Established by Policy, 1973-74
(Mean Amounts by Department and Institutional Control):
Public Institutions

Departments	All Departments		Departments With: No Tuition Waiver		Tuition Waiver	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Biochemistry	$ 2,905	$ 3,373	-[a]	$ 3,665	$ 2,732	$ 3,260
Number of Depts.	(33)	(36)		(10)	(24)	(26)
Biology	2,984	3,592	-	4,018	2,858	3,407
Number of Depts.	(31)	(33)		(10)	(22)	(23)
Chemical Engineering	2,963	3,792	-	-	2,847	3,686
Number of Depts.	(34)	(37)			(25)	(28)
Chemistry	3,028	3,667	$ 3,082	3,698	2,992	3,645
Number of Depts.	(43)	(48)	(17)	(20)	(26)	(28)
Economics	2,846	3,472	-	-	2,764	3,391
Number of Depts.	(33)	(32)			(25)	(25)
Electrical Engineering	2,934	3,710	3,176	3,957	2,380	3,612
Number of Depts.	(40)	(39)	(12)	(11)	(28)	(28)
Mathematics	3,062	3,881	-	-	2,868	3,891
Number of Depts.	(19)	(18)			(13)	(12)
Physics	3,152	3,572	3,522	3,723	3,012	3,516
Number of Depts.	(40)	(44)	(11)	(12)	(29)	(32)
Psychology	3,034	3,553	3,714	4,001	2,767	3,389
Number of Depts.	(39)	(41)	(11)	(11)	(28)	(30)
Sociology	2,914	3,537	-	-	2,871	3,551
Number of Depts.	(33)	(32)			(27)	(26)
All Departments	2,984	3,606	3,306	3,828	2,856	3,518
Number of Depts.	(345)	(360)	(98)	(102)	(247)	(258)

[a]Less than 10 departments provided data.

Table 8

Compensation Ranges Established by Policy, 1973-74
(Mean Amounts by Department and Institutional Control):
Private Institutions

Departments	All Departments		Departments With: No Tuition Waiver		Tuition Waiver	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Biochemistry	$ 2,463	$ 2,806	-[a]	-	$ 2,307	$ 2,538
Number of Depts.	(13)	(12)			(11)	(10)
Biology	2,691	3,211	-	-	2,252	2,795
Number of Depts.	(16)	(18)			(13)	(15)
Chemical Engineering	2,886	3,487	-	-	2,427	2,984
Number of Depts.	(16)	(21)			(12)	(16)
Chemistry	2,824	3,008	-	-	2,612	2,843
Number of Depts.	(16)	(22)			(12)	(18)
Economics	-	3,031	-	-	-	2,898
Number of Depts.		(12)				(11)
Electrical Engineering	2,831	3,226	-	-	2,418	2,848
Number of Depts.	(16)	(18)			(12)	(13)
Mathematics	-	2,889	-	-	-	2,889
Number of Depts.		(10)				(10)
Physics	2,789	3,096	-	-	2,487	2,806
Number of Depts.	(21)	(26)			(15)	(19)
Psychology	2,630	3,242	-	-	2,556	2,899
Number of Depts.	(12)	(15)			(10)	(12)
Sociology	2,502	2,941	-	-	2,330	2,795
Number of Depts.	(12)	(11)			(11)	(10)
All Departments	2,659	3,125	$ 3,787	$ 4,375	2,385	2,836
Number of Depts.	(138)	(165)	(27)	(31)	(111)	(134)

[a]Less than 10 departments provided data.

Table 9

Average Compensation Paid, 1973-74
(Mean Amounts by Department and Institutional Control)

Departments	Public Institutions			Private Institutions		
		Departments With:			Departments With:	
	All Departments	No Tuition Waiver	Tuition Waiver	All Departments	No Tuition Waiver	Tuition Waiver
Biochemistry	$ 3,000	$ 3,377	$ 2,819	$ 2,696	-[a]	$ 2,478
Number of Depts.	(37)	(12)	(25)	(15)		(10)
Biology	3,053	3,420	2,914	2,827	-	2,538
Number of Depts.	(40)	(11)	(29)	(22)		(16)
Chemical Engineering	3,059	3,018	3,073	3,150	-	2,694
Number of Depts.	(39)	(10)	(29)	(24)		(18)
Chemistry	3,234	3,284	3,198	2,987	-	2,777
Number of Depts.	(50)	(21)	(29)	(31)		(22)
Economics	2,961	-	2,945	2,741	-	2,455
Number of Depts.	(37)		(29)	(13)		(11)
Electrical Engineering	3,171	3,341	3,103	2,935	-	2,662
Number of Depts.	(45)	(13)	(32)	(25)		(16)
Mathematics	3,290	-	3,270	2,568	-	2,568
Number of Depts.	(20)		(13)	(10)		(10)
Physics	3,333	3,588	3,206	2,935	-	2,696
Number of Depts.	(51)	(17)	(34)	(28)		(20)
Psychology	3,132	3,880	2,891	2,852	-	2,691
Number of Depts.	(45)	(11)	(34)	(21)		(13)
Sociology	3,099	-	3,068	2,647	-	2,478
Number of Depts.	(32)		(26)	(15)		(12)
All Departments	3,137	3,373	3,040	2,879	$ 3,543	2,628
Number of Depts.	(396)	(116)	(280)	(204)	(56)	(148)

[a]Less than 10 departments provided data.

Table 10

Highest and Lowest Amounts of Compensation Paid, 1973-74
(Mean Amounts by Department and Institutional Control):

Public Institutions

Departments	All Departments		Departments With:			
			No Tuition Waiver		Tuition Waiver	
	Lowest	Highest	Lowest	Highest	Lowest	Highest
Biochemistry	$ 2,894	$ 3,256	$ 3,240	$ 3,611	$ 2,735	$ 3,078
Number of Depts.	(35)	(36)	(11)	(12)	(24)	(24)
Biology	2,882	3,442	3,197	3,770	2,743	3,296
Number of Depts.	(39)	(39)	(12)	(12)	(27)	(27)
Chemical Engineering	2,866	3,522	2,995	3,722	2,813	3,434
Number of Depts.	(38)	(39)	(11)	(12)	(27)	(27)
Chemistry	3,021	3,478	3,094	3,531	2,970	3,442
Number of Depts.	(49)	(49)	(20)	(20)	(29)	(29)
Economics	2,819	3,306	-[a]	-	2,739	3,323
Number of Depts.	(35)	(36)			(28)	(28)
Electrical Engineering	3,003	3,681	3,090	4,067	2,968	3,514
Number of Depts.	(42)	(43)	(12)	(13)	(30)	(30)
Mathematics	3,084	3,697	-	-	2,980	3,701
Number of Depts.	(20)	(21)			(13)	(14)
Physics	3,188	3,587	3,456	3,912	3,067	3,420
Number of Depts.	(48)	(50)	(15)	(17)	(33)	(33)
Psychology	2,926	3,411	3,604	4,001	2,693	3,214
Number of Depts.	(43)	(44)	(11)	(11)	(32)	(33)
Sociology	2,920	3,277	-	-	2,916	3,265
Number of Depts.	(32)	(32)			(25)	(25)
All Departments	2,964	3,466	3,211	3,716	2,860	3,356
Number of Depts.	(381)	(389)	(113)	(119)	(268)	(270)

[a]Less than 10 departments provided data.

Table 11

Highest and Lowest Amounts of Compensation Paid, 1973-74
(Mean Amounts by Department and Institutional Control)

Private Institutions

Departments	All Departments		Departments With:			
			No Tuition Waiver		Tuition Waiver	
	Lowest	Highest	Lowest	Highest	Lowest	Highest
Biochemistry	$ 2,409	$ 3,164	-[a]	-	$ 2,380	$ 2,889
Number of Depts.	(16)	(16)			(11)	(11)
Biology	2,657	3,091	-	-	2,267	2,660
Number of Depts.	(21)	(23)			(15)	(17)
Chemical Engineering	2,915	3,389	-	-	2,437	2,926
Number of Depts.	(24)	(24)			(17)	(18)
Chemistry	2,791	3,190	-	-	2,624	2,872
Number of Depts.	(28)	(30)			(19)	(21)
Economics	2,461	3,257	-	-	2,236	2,811
Number of Depts.	(14)	(15)			(12)	(12)
Electrical Engineering	2,515	3,224	-	-	2,359	3,012
Number of Depts.	(26)	(26)			(18)	(18)
Mathematics	-	-	-	-	-	-
Number of Depts.						
Physics	2,602	3,213	-	-	2,474	2,953
Number of Depts.	(28)	(30)			(20)	(21)
Psychology	2,652	3,504	-	-	2,453	2,997
Number of Depts.	(19)	(23)			(12)	(14)
Sociology	2,689	3,039	-	-	2,407	2,608
Number of Depts.	(16)	(16)			(12)	(12)
All Departments	2,635	3,214	$ 3,215	$ 4,133	2,409	2,860
Number of Depts.	(200)	(212)	(56)	(59)	(144)	(153)

[a]Less than 10 departments provided data.

Table 12

Average Compensation Paid to
Third-Year Graduate Research Assistants, 1973-74
(Mean Amounts by Department and Institutional Control)

Departments	Public Institutions			Private Institutions		
		Departments With:			Departments With:	
	All Departments	No Tuition Waiver	Tuition Waiver	All Departments	No Tuition Waiver	Tuition Waiver
Biochemistry	$ 3,078	$ 3,386	$ 2,930	$ 2,667	-[a]	$ 2,477
Number of Depts.	(37)	(12)	(25)	(17)		(12)
Biology	3,200	3,450	3,084	2,884	-	2,579
Number of Depts.	(41)	(13)	(28)	(24)		(18)
Chemical Engineering	3,132	3,009	3,175	3,280	-	2,822
Number of Depts.	(39)	(10)	(29)	(25)		(18)
Chemistry	3,311	3,350	3,284	3,010	-	2,807
Number of Depts.	(49)	(20)	(29)	(30)		(22)
Economics	3,151	-	3,167	3,039	-	2,720
Number of Depts.	(37)		(29)	(14)		(11)
Electrical Engineering	3,301	3,405	3,255	3,013	-	2,809
Number of Depts.	(43)	(13)	(30)	(26)		(17)
Mathematics	3,379	-	3,370	-	-	-
Number of Depts.	(19)		(12)			
Physics	3,375	3,630	3,252	3,059	-	2,795
Number of Depts.	(49)	(16)	(33)	(29)		(20)
Psychology	3,256	3,799	3,075	3,047	-	2,792
Number of Depts.	(44)	(11)	(33)	(23)		(14)
Sociology	3,233	-	3,180	2,784	-	2,536
Number of Depts.	(32)		(26)	(15)		(12)
All Departments	3,242	3,414	3,169	2,982	$ 3,670	2,716
Number of Depts.	(390)	(116)	(274)	(212)	(59)	(153)

[a]Less than 10 departments provided data.

Table 13

Total Compensation[a] Paid to
Third-Year Graduate Research Assistants, 1973-74
(Mean Amounts by Department and Institutional Control)

Department	Public Institutions		Private Institutions
	Resident Students	Nonresident Students	All Students
Biochemistry	$ 3,354	$ 3,931	$ 4,218
Number of Depts.	(37)	(36)	(17)
Biology	3,438	3,974	4,710
Number of Depts.	(39)	(39)	(24)
Chemical Engineering	3,375	3,932	5,057
Number of Depts.	(38)	(38)	(25)
Chemistry	3,532	3,971	4,809
Number of Depts.	(48)	(48)	(30)
Economics	3,332	3,964	4,850
Number of Depts.	(37)	(37)	(13)
Electrical Engineering	3,456	3,999	4,582
Number of Depts.	(41)	(41)	(26)
Mathematics	3,494	4,140	5,052
Number of Depts.	(19)	(19)	(10)
Physics	3,575	4,123	4,719
Number of Depts.	(48)	(48)	(29)
Psychology	3,524	4,133	4,416
Number of Depts.	(43)	(42)	(23)
Sociology	3,516	4,171	4,736
Number of Depts.	(31)	(31)	(15)
All Departments	3,467	4,028	4,706
Number of Depts.	(381)	(379)	(212)

[a]Total Compensation equals base amount, plus any tuition waiver.

Table 14

Total Compensation[a] Paid to
Third-Year Graduate Research Assistants, 1973-74[b]
at Institutions wth the Highest Tuition and Fees
(Mean Amounts by Department and Institutional Control)

Departments	Public Institutions		Private Institutions
	Resident Students	Nonresident Students	All Students
Biochemistry	$ 3,513	$ 4,204	$ 4,549
Number of Depts.	(13)	(12)	(11)
Biology	3,654	4,331	4,819
Number of Depts.	(13)	(13)	(16)
Chemical Engineering	3,417	4,203	5,378
Number of Depts.	(10)	(10)	(15)
Chemistry	3,556	4,053	5,019
Number of Depts.	(17)	(17)	(18)
Economics	3,259	3,984	-
Number of Depts.	(14)	(14)	
Electrical Engineering	3,473	4,130	5,238
Number of Depts.	(12)	(12)	(14)
Mathematics	3,596	4,222	-
Number of Depts.	(10)	(10)	
Physics	3,744	4,386	4,935
Number of Depts.	(17)	(17)	(18)
Psychology	3,652	4,292	4,910
Number of Depts.	(18)	(17)	(14)
Sociology	3,606	4,354	5,039
Number of Depts.	(11)	(11)	(10)
All Departments	3,557	4,215	5,024
Number of Depts.	(135)	(133)	(131)

[a]Total Compensation equals base amount plus any tuition waiver.

[b]Of the institutions which responded to the survey, departments from both the 20 public and 20 private colleges and universities which reported the highest tuition and fees were used for this analysis; for public institutions, the out-of-state tuition rate was the basis for determining inclusion.

Table 15

Total Compensation[a] Paid to
Third-Year Graduate Research Assistants, 1973-74
at Institutions Granting the Most Science and Engineering Degrees[b]
(Mean Amounts by Department and Institutional Control)

Departments	Public Institutions		Private Institutions
	Resident Students	Nonresident Students	All Students
Biochemistry	$ 3,321	$ 3,987	$ 4,384
Number of Depts.	(15)	(14)	(12)
Biology	3,702	4,512	4,868
Number of Depts.	(12)	(12)	(15)
Chemical Engineering	3,536	4,294	5,185
Number of Depts.	(16)	(16)	(18)
Chemistry	3,464	4,045	4,852
Number of Depts.	(15)	(15)	(20)
Economics	3,381	4,189	4,875
Number of Depts.	(18)	(18)	(12)
Electrical Engineering	3,530	4,168	4,994
Number of Depts.	(17)	(17)	(17)
Mathematics	-	-	-
Number of Depts.			
Physics	3,596	4,235	4,727
Number of Depts.	(18)	(18)	(19)
Psychology	3,721	4,358	4,347
Number of Depts.	(15)	(15)	(12)
Sociology	3,486	4,288	4,854
Number of Depts.	(15)	(15)	(10)
All Departments	3,522	4,230	4,821
Number of Depts.	(150)	(149)	(142)

[a]Total Compensation equals base amount plus any tuition waiver.

[b]Of the institutions which responded to the survey, departments from both the 20 public and 20 private colleges and universities which granted the largest numbers of science and engineering degrees in 1970-71 (according to a list maintained by the National Science Foundation) were used for this analysis.

Appendix A:

Survey Questionnaire

OMB No. 99-R0265
Expiration June 1974

American Council on Education
Higher Education Panel, Survey No. 20

Compensation Practices for Graduate Research Assistants

Department_____

Report prepared by:
Name_____
Title_____
Telephone No._____

This survey focuses on compensation practices for graduate research assistants, i.e., graduate students who are holding what are considered to be regular or full assistantship appointments (as defined at your institution) that are funded from research projects.

If there are no graduate students in your department holding regular or full appointments as research assistants, please write "NONE" on this report form and explain briefly. If there are any policies or circumstances in your department that cannot be adequately indicated on this questionnaire, we would appreciate it if you would provide additional comments.

_____

1a. Are maximum and/or minimum amounts of compensation established by (check one): institutional policy_____; departmental policy_____; no applicable policy (e.g., left to faculty discretion)_____.

1b. If compensation range is established by policy, what are the maximum and minimum amounts?

	Academic Year (1973-74)	Summer (1974)
Maximum	$_____	$_____
Minimum	$_____	$_____

1c. The amount a graduate research assistant receives varies by: (check all that apply)
Years of research experience___
Amount of graduate study completed___
Number of dependents___
Other (please explain)_____
_____

2a. In terms of present practice, what are the highest, lowest, and average (or typical) amounts being paid to graduate students holding regular or full assistantships in your department? (Report gross pay before deductions).

	Academic Year (1973-74)	Summer (1974)
Highest	$_____	$_____
Lowest	$_____	$_____
Average or typical	$_____	$_____

Continued on reverse side

2b. Please estimate the average or typical amount of compensation received by a third-year (unmarried) graduate research assistant in your department:

Academic year (1973-74)$_____ Summer (1974)$_____

3a. Are graduate research assistants usually granted complete or partial waiver of tuition and/or fees in addition to compensation indicated above?

No_____
Yes_____

3b. If yes, what is the amount of waiver for the typical third-year unmarried graduate research assistant?

Academic year (1973-74)$_____ Summer (1974)$_____

4. Typical tuition and/or fees for a graduate student carrying a full-course load for the academic year (9 months) 1973-74: $_____

5. What is the estimated value of fringe benefits (exclusive of waiver of tuition and/or fees) provided to the typical unmarried third-year graduate research assistant? (See definition of fringe benefits below.)

Academic year (1973-74)$_____ Summer (1974)$_____

Fringe benefits are defined as contributions in the form of supplementary or deferred compensation other than salary (exclude employees' contributions), such as health insurance, group life insurance, FICA, etc. Do not include benefits which may be provided to all graduate students and miscellaneous personal benefits in kind, such as use of faculty club, reduced prices on tickets, etc., unless the student has the option of a cash payment instead.

Space for Additional Comments:

Thank you for your cooperation. Please return this questionnaire to your institutional representative by May 6th.

Appendix B:

List of Institutions

Institutions Included in the Higher Education Panel Survey on Compensation Practices for Graduate Research Assistants

Alaska, University of
Arizona State University
Arizona, University of
Arkansas, University of (Fayetteville)
Auburn University
Boston University
Brandeis University
Brown University
California Institute of Technology
California, University of (Berkeley)
California, University of (Davis)
California, University of (Los Angeles)
California, University of (Riverside)
California, University of (Santa Barbara)
Carnegie Mellon University
Case Western Reserve University
Catholic University
Cincinnati, University of
Clemson University
Colorado State University
Colorado, University of (Boulder)
Columbia University
Cornell University
Creighton University
Dartmouth College
Delaware, University of
Denver, University of
Detroit, University of
Duke University
Emory University
Florida State University
Florida, University of
George Washington University
Georgia, University of
Harvard University
Hawaii, University of
Houston, University of
Idaho, University of
Illinois Institute of Technology
Illinois, University of (Urbana-Champaign)
Indiana, University of (Bloomington)
Iowa State University
Iowa, University of
Johns Hopkins University
Kansas State University
Kentucky, University of
Lehigh University
Louisiana State University (Baton Rouge)
Maine, University of (Orono)
Marquette University
Maryland, University of (College Park)
Massachusetts, University of (Amherst)
Miami, University of
Michigan, University of (Ann Arbor)
Minnesota, University of (Minneapolis)
Mississippi State University
Missouri, University of (Columbia)
Montana State University
Nebraska, University of (Lincoln)
Nevada, University of (Reno)

New Hampshire, University of
New Mexico, University of
New York University
Notre Dame, University of
North Carolina State University (Raleigh)
North Carolina, University of (Chapel Hill)
North Dakota State University (Fargo)
Northwestern University
Ohio State University (Columbus)
Oklahoma State University
Oregon State University
Oregon, University of
Pennsylvania State University
Pennsylvania, University of
Pittsburgh, University of
Princeton University
Portland, University of
Purdue University (Lafayette)
Rensselaer Polytechnic Institute
Rhode Island, University of
Rice University
Rochester, University of
Rutgers, State University of New Jersey
Saint Louis University
South Dakota, University of (Vermillion)
Southern California, University of
Stanford University
SUNY - Buffalo
SUNY - Stony Brook
Syracuse University
Tennessee, University of (Knoxville)
Texas A&M University
Texas Technical University
Texas, University of (Austin)
Tulane University
Tulsa, University of
Utah State University
Utah, University of
Vanderbilt University
Vermont, University of
Virginia Polytechnic Institute
Washington State University
Washington University
Washington, University of
Wayne State University
West Virginia University
Wisconsin, University of (Madison)
Wyoming, University of
Yale University
Yeshiva University

Other Reports of the Higher Education Panel
American Council on Education

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Blandford, B. and Dutton, D. **Survey of First-Year Graduate and Postdoctoral Enrollment in Science and Engineering.** Higher Education Panel Report, No. 1, August, 1971.

Blandford, B. and Dutton, D. **Research Support for Science Faculty.** Higher Education Panel Report, No. 2, November, 1971.

Astin, A., Blandford, B., and Mahn, T. **Freshman Class Vacancies in Fall 1971 and Recent Trends in Enrollment of Minority Freshmen.** Higher Education Panel Report, No. 3, February, 1972.

Changes in Graduate Programs in Science and Engineering 1970–72 and 1972–1974. Science Resources Studies Highlights. Washington: National Science Foundation, July, 1972.

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El-Khawas, E. H. and Kinzer, J. L. **Enrollment of Minority Graduate Students at Ph.D. Granting Institutions.** Higher Education Panel Report No. 19, August, 1974.

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Single copies of the above reports may be obtained from the Higher Education Panel, American Council on Education, One Dupont Circle, Washington, D.C. 20036.